

PROVIDENCE CORE CITIES DATA 1995-2005

Supplement to:
**CHILDHOOD LEAD POISONING IN RHODE ISLAND:
THE NUMBERS 2006 EDITION**

Rhode Island Department of Health
Childhood Lead Poisoning Prevention Program
December 2006



Healthy Homes
Healthy Children

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The Rhode Island Childhood Lead Poisoning Prevention Program has a strategic plan to eliminate lead poisoning by 2010 <http://www.health.ri.gov/lead/family/eliminationplan.pdf>. The main objective of this plan is for each city and town to decrease the proportion of new cases of lead poisoning in children under six years of age to less than 5% without decreasing the availability of lead safe, affordable housing.

Over the past eleven years, new cases of lead poisoning in Rhode Island have been concentrated in cities where, according to the 2000 Census, the child poverty rate is greater than 15%. These cities are designated as “core cities” and include Central Falls, Newport, Pawtucket, Providence, West Warwick, and Woonsocket.

For this reason, we are presenting data specific to each of the core cities so that legislators, community leaders, and the public better understand the extent of the lead poisoning problem in these areas.

Eliminating Childhood Lead Poisoning by 2010

In 2004, Rhode Island developed a Plan to Eliminate Childhood Lead Poisoning by the end of 2010. This Plan focuses on promoting primary prevention while maintaining secondary prevention efforts in the state. Primary prevention reduces or eliminates lead hazards in the environment before a child is exposed. Secondary prevention includes universal screening of children to identify those with elevated blood lead levels (BLL), and in turn removing or reducing any further exposure to the child. The Plan also describes the strategic shift from a health approach to a healthy housing approach. Progress toward elimination was to be evaluated by two factors: the incidence of lead poisoning and the availability of lead safe, affordable housing. The lack of comprehensive, quality, housing data makes measuring the housing component infeasible.

To address this need for housing data, the Rhode Island Childhood Lead Poisoning Prevention Program (RI CLPPP) and the state's housing agency, Rhode Island Housing Resources Commission (HRC) established the "Healthy Housing Collaborative," a group composed of housing-related agencies throughout the state.

In addition to establishing the Healthy Housing Collaborative, the two agencies also have agreed to:

- Use the Healthy Housing Collaborative as an advisory board;
- Develop a vision statement for "healthy housing" in the state;
- Conduct a literature review on healthy housing issues;
- Prepare reports on the impact of unhealthy housing on child health and development;
- Assess the benefits associated with improved housing maintenance and building practices;
- Conduct a cost benefit analysis of building and maintaining healthy homes;
- Conduct an assessment of state resources currently allocated to healthy housing; and
- Conduct an assessment of major strategic plans in the state to identify overlapping goals and opportunities for partnership and collaboration.

With this new strategy in place, Rhode Island has formulated measures for reporting progress towards its goal. With input from RI CLPPP's Advisory Committee, the Environmental Lead Interagency Council, and other partners, RI CLPPP has developed its strategy, detailed on the next page.

Goal: To eliminate childhood lead poisoning in Rhode Island by the end of 2010.

Milestone: To decrease the number of new cases of lead poisoning (BLL of ≥ 10 $\mu\text{g/dL}$) in children under six years of age in Rhode Island without displacing children, decreasing screening rates, or decreasing access to affordable housing.

Four Measures That Will Jointly Determine Progress In The Elimination Goal:

Decrease in the number of new cases of lead poisoned children (BLL ≥ 10 $\mu\text{g/dL}$) in the state from 621 at the end of 2005 to:

- 520 at the end of 2006
- 420 at the end of 2007
- 320 at the end of 2008
- 220 at the end of 2009
- 120 at the end of 2010¹

Maintenance of screening rates² as follows:

- Maintaining the number of 18-month-old children screened for lead at least once, at 70% or more.
- Maintaining the number of 36-month-old children screened for lead at least twice, a minimum of 12 months apart at 40% or more.

Availability of affordable housing, to be measured by:

- Developing proxies to measure affordable housing by the end of 2006. Potential measures may include the number of subsidized housing units by city and town, and the progress made by cities and towns on achieving affordable housing goals.
- Utilizing those proxy measures by the end of 2007.
- Refining measures of affordable housing by the end of 2008, and continuing to use these measures through 2010.

The number of children who are displaced shall be measured by public data sets such as KIDSNET data and free school lunch.

¹ No further Rhode Island cases of lead poisoning will be identified after January 1, 2011.

² These screening rates are calculated for a specific birth cohort. Data included here are for the 2001 birth cohort.

REPORT

RI CLPPP will prepare an annual report that will include data on each of the above measures to assess progress made towards its goal to eliminate lead poisoning. The Annual Report will be issued in May 2007 for the first time and each May thereafter. This report will also acknowledge cities and towns that are working towards the elimination goal. Cities and towns will be recognized as having taken steps towards the elimination of lead poisoning when they:

1. Provide the Rhode Island Department of Health and the Housing Resources Commission with an electronic annual report that includes a list of addresses of units in their jurisdiction considered to be low and moderate-income housing. These reports can be submitted in conjunction with updated reports submitted to the Housing Resources Commission under the Low and Moderate Housing Act.
2. Provide the Rhode Island Department of Health and the Housing Resources Commission with a standardized electronic file of unique addresses, with homeownership status for all properties/units. Addresses must be compatible with Geographic Information Systems (GIS) software.
3. Identify ways to obtain an electronic version of addresses of homes in Rhode Island that are subsidized by Housing and Urban Development (HUD).
4. Work with the Rhode Island Department of Health and the Housing Resources Commission to gather the above-mentioned data in a housing surveillance system.



Understanding Blood Lead Levels

What is a level of concern?

A level of concern is the threshold used to define an elevated blood lead level. Children with a blood lead level greater than the level of concern (i.e. children with an elevated blood lead level) should be monitored and re-tested. Primary prevention activities, such as community-wide environmental interventions and nutritional and educational campaigns, should be directed at reducing children's blood lead levels below the level of concern. In 1991, the CDC set the level of concern at a blood lead level $\geq 10 \mu\text{g/dL}$.



Should we lower the blood lead level of concern?

In response to questions about whether to change the level of concern based on recent research that found that blood lead levels lower than $10 \mu\text{g/dL}$ can have harmful effects,^{3,4} CDC has prepared the following statement, which can be found on the CDC website at <http://www.cdc.gov/lead/qanda.htm>:

“Recent studies suggest that adverse health effects exist in children at blood lead levels less than $10 \mu\text{g/dL}$. In the past the CDC has lowered the level considered elevated in response to similar reports. However, at this time the reasons not to lower the level of concern are as follows:

- No effective clinical interventions are known to lower the blood lead levels for children with levels less than $10 \mu\text{g/dL}$ or to reduce the risk for adverse developmental effects.
- Children cannot be accurately classified as having blood lead levels above or below a value less than $10 \mu\text{g/dL}$ because of the inaccuracy inherent in laboratory testing.
- Finally, no evidence exists of a threshold below which adverse effects are not experienced. Thus, any decision to establish a new level of concern would be arbitrary and provide uncertain benefits.

These studies support making primary prevention of childhood lead poisoning a high priority for health, housing, and environmental agencies at the state, local, and federal levels.”

³ Canfield RL, Henderson CR, Cory-Slechta DA, Cox C, Jusko TA, Lanphear BP. Intellectual impairment in children with blood lead concentrations below 10mcg per Deciliter. *New England Journal of Medicine* 2003; 348:1517-26.

⁴ Selevan SG, Rice DC, Hogan KA, Euling SY, Pfahles-Hutchens A, Bethel J. Blood Lead Concentration and Delayed Puberty in Girls. *New England Journal of Medicine* 2003; 348:1527-36.

What is an action level?

An action level is the threshold at which interventions should be implemented based on evidence that the interventions are effective. It is impossible to define one action level for all interventions, so various action levels trigger different interventions. According to CDC guidelines, community prevention activities, such as nutritional and educational campaigns, should be implemented at blood lead levels ≥ 10 $\mu\text{g}/\text{dL}$, and individual prevention activities, such as case management and environmental investigations, should be implemented at blood lead levels ≥ 15 $\mu\text{g}/\text{dL}$.⁵ For example, while the overall goal is to reduce children's blood lead levels below 10 $\mu\text{g}/\text{dL}$, there are reasons for not implementing individual, environmental, and medical interventions for children with blood lead levels between 10 and 14 $\mu\text{g}/\text{dL}$:

- Effective environmental and medical interventions for children with blood lead levels in this range have not yet been identified.
- Given limited resources, the sheer number of children in this range would preclude effective case management and would detract from the individualized follow-up required by children with higher blood lead levels.

Lead Action Levels in Rhode Island

The guidelines issued by CDC were used to define various action levels in Rhode Island. The different action levels are detailed in the table below.

Category	Action Level	Action
Elevated Blood Lead Level	One BLL between 10-14 $\mu\text{g}/\text{dL}$	Capillary Letter sent to Primary Care Provider recommending venous test to confirm the BLL* Venous Letter sent to family inviting them to request a home visit through the Family Outreach Program*
	One BLL between 15-19 $\mu\text{g}/\text{dL}$	Capillary Letter sent to Primary Care Provider recommending venous test to confirm the BLL Venous Family is referred to a lead center** for an in-home lead education visit and some environmental intervention (i.e. temporary lead hazard control measures, window replacement)
Significant Lead Poisoning	One Venous BLL 20 $\mu\text{g}/\text{dL}$ or Two BLLs (Capillary or Venous) 15-19 $\mu\text{g}/\text{dL}$ done 90-365 days apart***	Family is referred to a lead center for an in-home lead education visit and is offered an environmental inspection.
<p>* In addition to the actions described, a letter is sent to families living in Providence ONLY, informing them that they can contact the city of Providence for a free environmental inspection of their home.</p> <p>** A lead center is a non-profit agency funded by Medicaid that offers comprehensive non-medical case management services to families of children with lead poisoning.</p> <p>*** Two venous blood lead levels 15-19 $\mu\text{g}/\text{dL}$ done between 90 and 365 days apart may also be referred to as "Persistent Lead Poisoning." As of January 1, 2006 the definition of persistent lead poisoning is defined as two VENOUS blood lead levels 15-19 $\mu\text{g}/\text{dL}$ done 90-365 days apart.</p>		

⁵ CDC. Preventing Lead Poisoning in Young Children. Atlanta: U.S. Department of Health and Human Services, 1991.

Understanding the Lead Data

In Rhode Island, health care providers are required by law to annually screen their patients between nine months and six years of age for lead poisoning. The screening process involves collecting a sample of blood from the child, either from a capillary (finger stick) or a vein (venous test), and analyzing the blood to determine the amount of lead in the sample. Blood lead levels (BLL) are measured and reported as micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$ or mcg/dL).

The data presented in this report are based on all blood lead results, both capillary and venous, performed on children from birth to six years of age in the state of Rhode Island.⁶ Although the guidelines recommend that children begin to be screened at nine months of age, some children may be screened earlier if they are at high risk for lead poisoning. For the incidence and prevalence analyses, each child is represented once per year in which he was screened.



Confirmed Tests in 2005

Prior to July 1, 2004, if a child under the age of six had a capillary blood lead test result $\geq 20 \mu\text{g}/\text{dL}$, the Rhode Island Department of Health would recommend that the child have a confirmatory venous test within three months. On July 1, 2004, the Rhode Island Department of Health revised the Lead Screening and Referral Guidelines and began recommending a confirmatory venous test for any child under the age of six who had a capillary blood lead level $\geq 10 \mu\text{g}/\text{dL}$ (instead of $\geq 20 \mu\text{g}/\text{dL}$). The Rhode Island Department of Health is also recommending that only venous tests be used for confirmatory testing purposes.

Since these changes went into effect in July 2004, the first full year for which RI CLPPP has confirmed capillary test data is 2005. As a result, 2005 data presented in this document are based on venous tests and confirmed capillary tests only. The data presented for previous years are based on all venous and capillary tests.

⁶Given that calculations in this document are based on screening data rather than population data for all children under the age of six, the numbers presented here are estimates.

Compliance with Screening Guidelines

All Rhode Island children between nine months and six years of age are required by law to be screened for lead poisoning annually. Compliance with these guidelines is assessed by measuring a) the proportion of children born in a given year (birth cohort) with at least one blood lead test by 18 months of age and b) the proportion of children born in a given year with at least two blood lead tests, a minimum of 12 months apart, by 36 months of age.

One Screening Test by 18 Months of Age

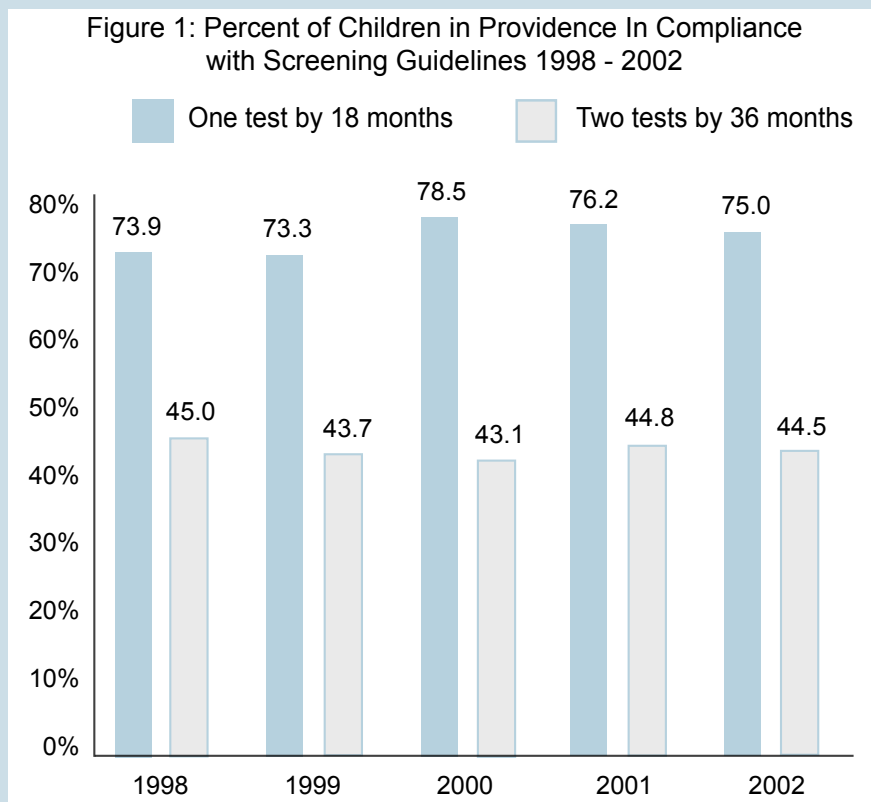
Screening children by 18 months of age is important to promptly identify children with elevated blood lead levels and offer interventions. Rhode Island has one of the highest screening rates in the nation. Approximately 70% of children in RI are screened at least once by 18 months of age. This rate has been consistent between 1998 and 2002, the year for which we have the most recent data. The screening rates among children 18 months of age in Providence are slightly higher than the screening rates statewide.

Two Screening Tests by 36 Months of Age

Compliance with the screening guidelines decreases as children get older. The statewide screening rate drops to approximately 40% when looking at the percent of children with two screening tests, at least 12 months apart, by 36 months of age. This rate has been consistent between 1998 and 2002, the year for which we have the most recent data. The average screening rate among children 36 months of age in Providence is 45%, approximately 5% higher than the average statewide screening rate for children in this age group.

A variety of outreach efforts have been made to achieve this high rate of screening, such as sending reminders to parents to have their children tested at the 12 month well-child visit and providing pediatric practices with lists of unscreened children in their practices between the ages of 22 and 24 months. In addition, many pediatric practices have access to KIDSNET, an electronic database containing preventive health information for all children born in the state since 1997. KIDSNET allows doctors to monitor lead screening rates in their practices.

Although the majority of the population is being screened, efforts must continue to focus on screening children after 18 months of age.

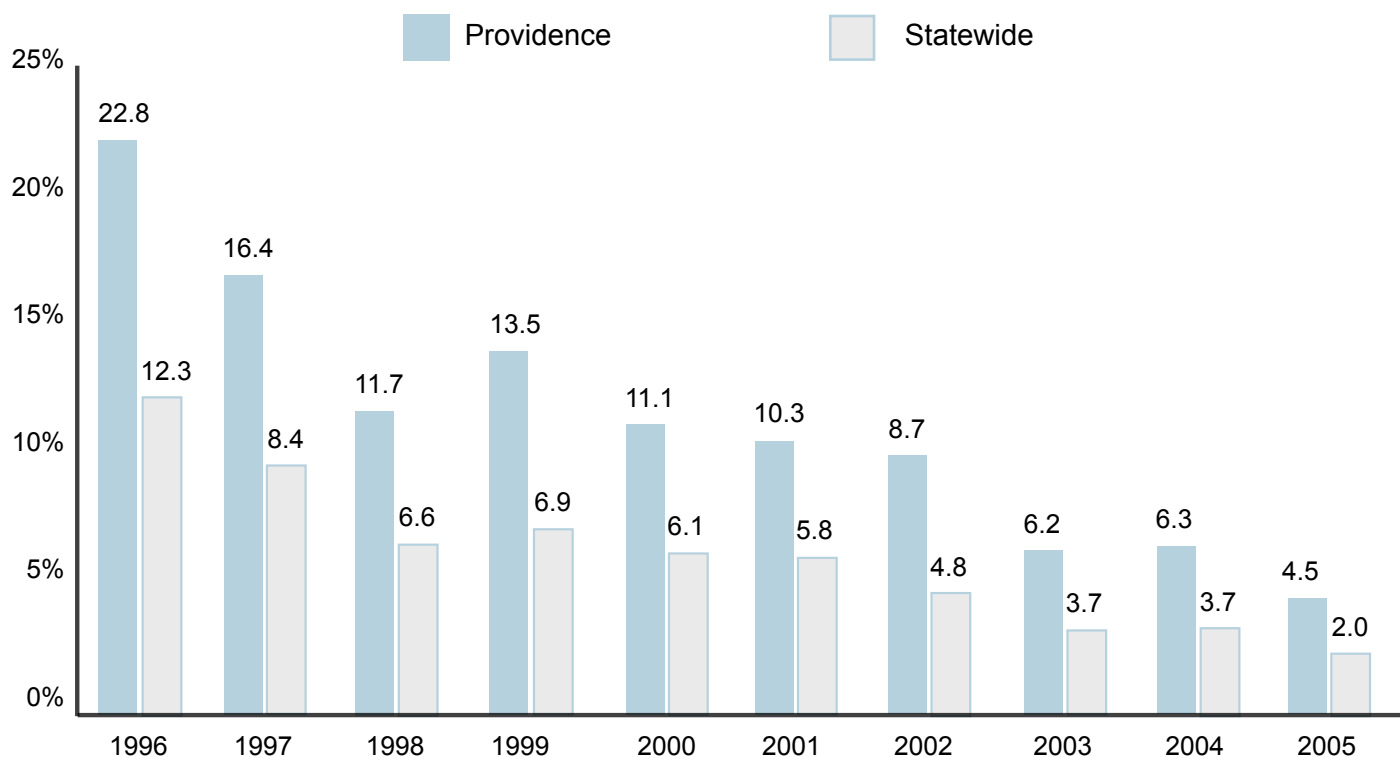


Incidence of Lead Poisoning

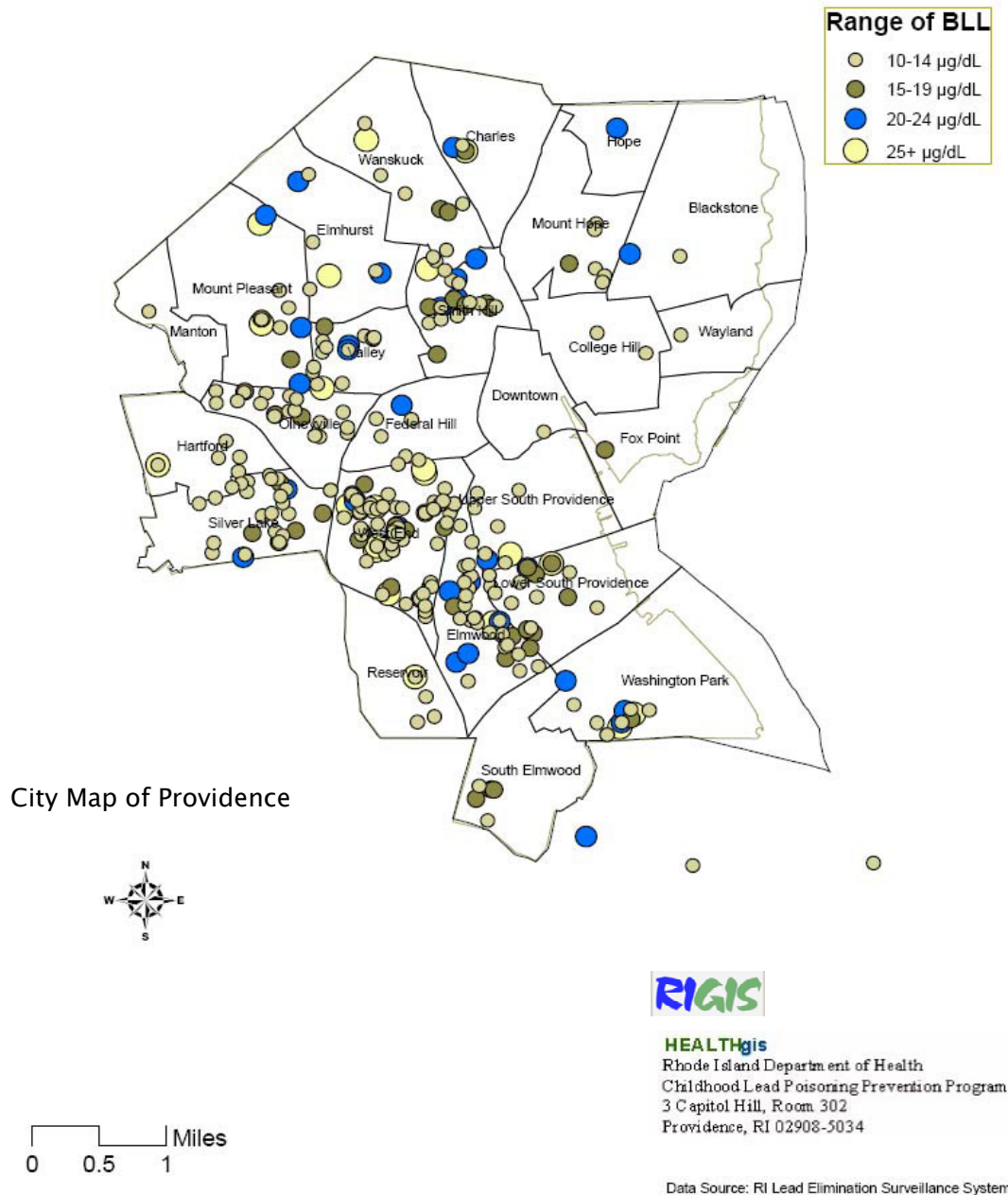
The Department of Health tracks and reports the number of newly lead poisoned children (blood lead level ≥ 10 $\mu\text{g/dL}$) among children less than six years of age who have never had an elevated blood lead level in the past. This is known as the incidence rate.

Over the past ten years, the proportion of new cases of lead poisoning among children in Providence has declined from 22.8% in 1996 to 4.5% in 2005. This decline is consistent with the statewide trend over the last decade. In spite of the considerable decline in incidence over time, 341 children living in Providence were lead poisoned for the first time in 2005.

Figure 2: Incidence of Lead Poisoning in Providence and Statewide 1996 - 2005

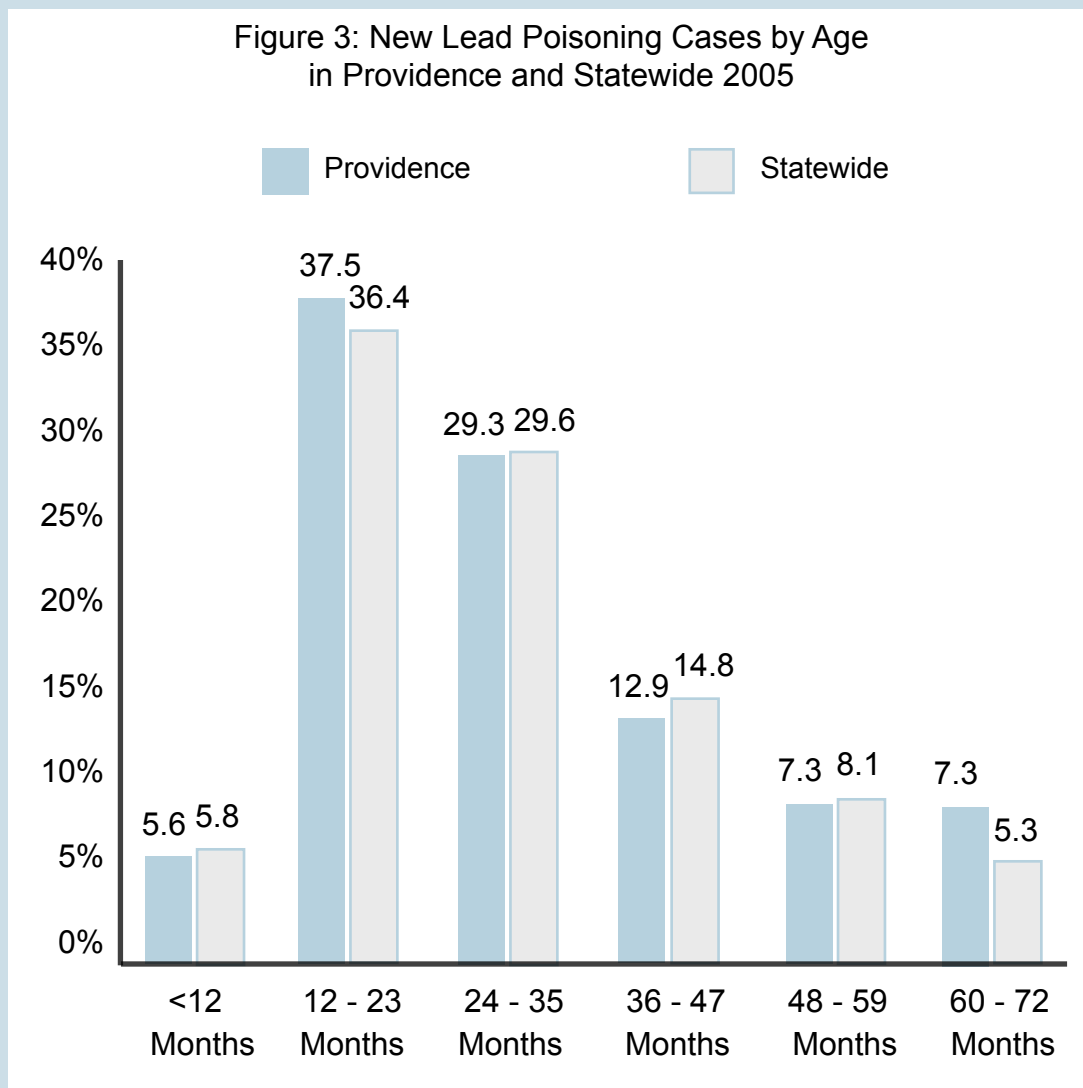


Incidence of Lead Poisoning in Providence 2005



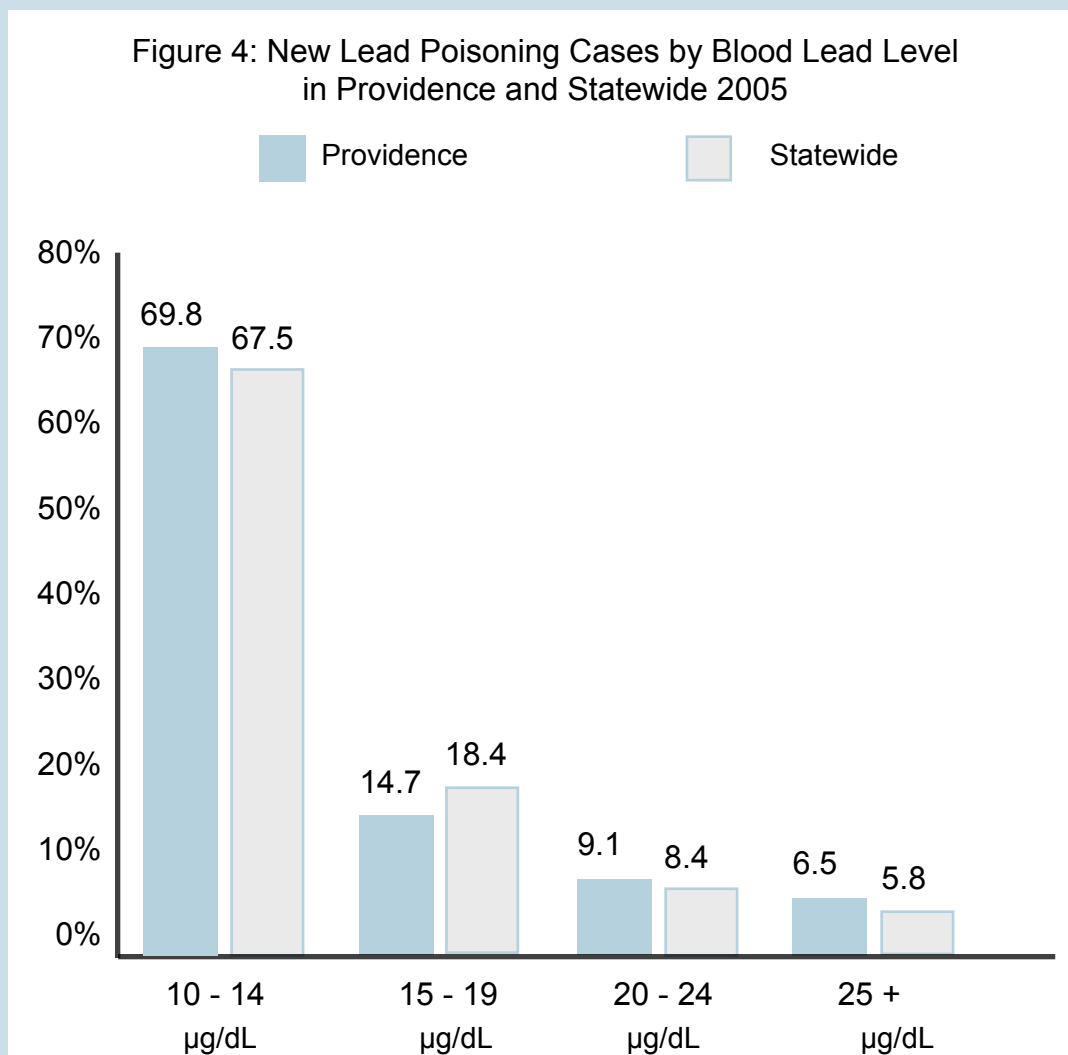
Incidence of Lead Poisoning by Age

The percentage of newly lead poisoned children by age in Providence in 2005 is similar to the statewide percentage. In Providence and statewide, most first-time poisonings occur among one and two-year-old children. One hundred twenty-eight one year olds and 100 two year olds were lead poisoned in Providence in 2005. Nineteen children under the age of one and forty-four three-year-olds were identified with lead poisoning. The remaining fifty lead poisoned children were split among four and five year olds.



Incidence of Lead Poisoning by Blood Level

The percentage of newly lead poisoned children by blood lead level in Providence in 2005 follows the same trend as the statewide distribution. In Providence, as well as statewide, lead poisoning is being detected among the majority of children when their blood lead levels are in the 10-14 $\mu\text{g/dL}$ range. This indicates that screening practices are successfully identifying children with elevated blood lead levels before they become highly elevated.

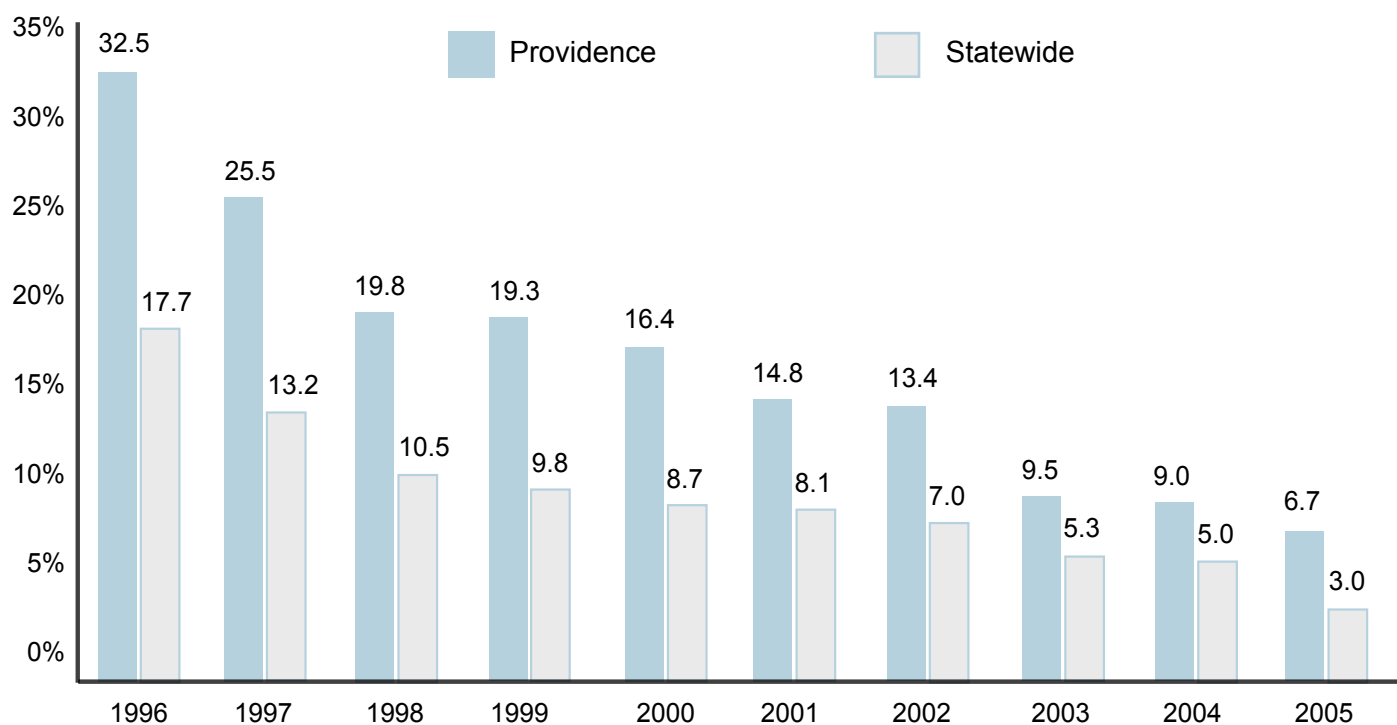


Prevalence of Lead Poisoning

The Rhode Island Department of Health calculates the prevalence of lead poisoning annually. Prevalence is the proportion of children with a blood lead level ≥ 10 $\mu\text{g/dL}$ in a given year. This includes newly lead poisoned children, as well as lead poisoned children who were diagnosed in previous years.

Over the past ten years, the prevalence of lead poisoning among children in Providence has declined from 32.5% in 1996 to 6.7% in 2005. This decline is consistent with the statewide trend over the last decade. Although the prevalence of lead poisoning is decreasing over time, a total of 558 children living in Providence had lead poisoning in 2005.

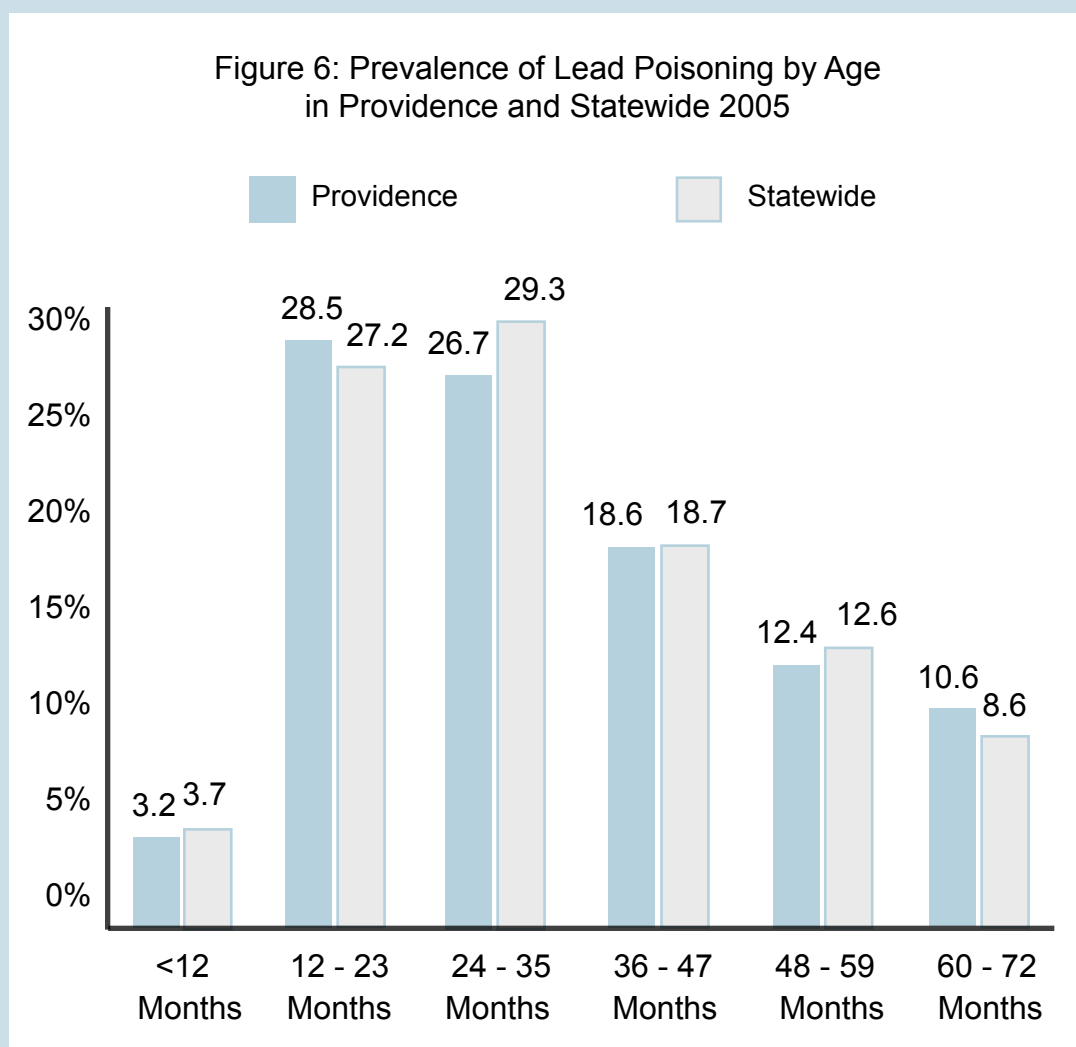
Figure 5: Prevalence of Lead Poisoning in Providence and Statewide 1996 - 2005



Prevalence of Lead Poisoning by Age

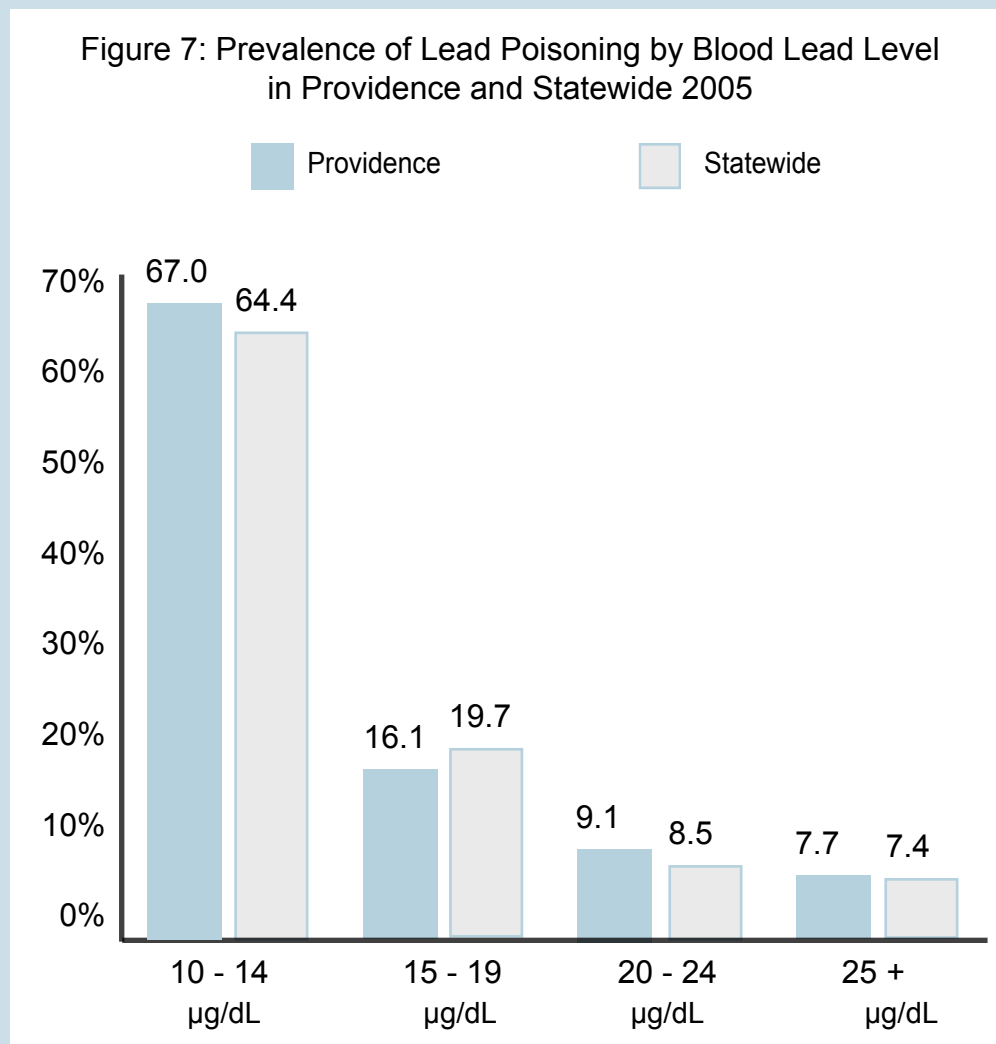
The percentage of children with lead poisoning by age in Providence in 2005 is similar to the statewide percentage, with the majority of lead poisoning affecting children between one and three years of age. There were 159 one-year-olds, 149 two-year-olds, and 104 three-year-olds with lead poisoning in Providence 2005. Only 18 cases of lead poisoning were identified before one year of age, and the remaining 128 cases were split equally among four and five-year-olds.

The remaining 229 cases of lead poisoning were broken down among three, four, and five-year-olds



Prevalence of Lead Poisoning by Blood Lead Level

The prevalence of lead poisoning by blood lead level in Providence in 2005 generally follows the statewide distribution. Approximately two thirds of lead poisoned children in Providence, as well as throughout the state, have blood lead levels in the 10-14 $\mu\text{g}/\text{dL}$ range. This indicates that among children who are lead poisoned, few have blood lead levels above 14 $\mu\text{g}/\text{dL}$.



Environmental Inspections Offered

In Rhode Island, comprehensive environmental inspections are offered to families of children who have an environmental intervention blood lead level (EIBLL)⁷. Families are offered an environmental inspection at no cost. The landlord's permission is neither required nor sought for the inspection to occur.

Although inspections are offered to all children with environmental intervention blood lead levels, the inspections may not be performed if the family does not respond to letters or phone calls, or if the family refuses the inspection. If the child moves before the inspection is offered and/or performed, the family is offered an inspection at their new address, and a letter is sent to the previous address informing the new occupants that if they have children under six years of age residing at the address, they can receive a free inspection.

In 2005, inspections were offered to ninety families in Providence. Inspections were performed in fifty-three homes. Fourteen families refused the inspection, eight families did not respond to letters and/or phone calls, eight families could not be located, ten families moved before the inspection could be performed, and five families are awaiting an inspection. These counts are based on a data report of March 13, 2005.

For more detailed information about environmental inspections offered between 2001 and 2005, see Figure 8.

Figure 8: Environmental Inspections Offered
in Providence 2001-2005⁸

	2001	2002	2003	2004	2005
Inspections Offered	208	153	95	85	90
Child moved	22	9	13	8	10
No response to letters and calls	15	11	10	8	8
Inspection refused	37	36	12	10	14
Pending Inspection	0	0	0	0	5
Inspections Performed	134	97	60	59	53

⁷ EIBLL is defined as a venous blood lead level ≥ 20 $\mu\text{g}/\text{dL}$ in a child under six years of age, or two blood lead tests from a child under six years of age, done between 90 and 365 days apart, with a blood lead level ≥ 15 $\mu\text{g}/\text{dL}$. EIBLL is synonymous with significant lead poisoning.

⁸ Based on data generated March 13, 2006.

Status of Environmental Inspections

An environmental case is opened for each significantly or persistently lead poisoned child who receives an inspection. Once the case is opened, the Rhode Island Department of Health works with the property owner until the entire property, including the interior, exterior, and soil, are abated and free of lead hazards.

In some instances, cases are closed before abatement is complete. This can occur if the parent of the child is the owner of the property or if the property is no longer regulated, such as illegal apartments that have been dismantled, properties that have been converted to commercial use, or properties that have been razed.

Of the fifty-three environmental cases that were opened in Providence in 2005, eighteen are closed. Nine of the closed cases have been completely abated, and eight have been closed because the parent of the child is the owner of the property. Twenty-five environmental cases are in various stages of the abatement process, three are working with HUD, five are awaiting exterior hazards to be abated, and two cases are awaiting soil abatement. All of these cases remain open and ongoing with the Rhode Island Department of Health.

For a breakdown of the status of cases opened in 2001-2005, see Figure 9.

Figure 9: Status of Environmental Inspections Offered in Providence 2001-2005⁹

	2001	2002	2003	2004	2005
Closed Cases	127	87	51	38	18
No lead hazard found	2	1	1	0	1
No longer regulated	1	1	0	0	0
Parent is owner of property, case closed after 90 days	28	21	8	13	8
Abatement complete excluding soil remediation	0	0	0	0	0
Lead hazard completely abated	96	64	42	25	9
Ongoing Cases	7	10	9	21	35
Abatement complete excluding soil remediation	2	0	2	0	2
Exterior abated, interior pending	0	0	1	1	0
Interior abated, exterior pending	0	0	1	5	5
Enrolled or enrolling in a HUD program, waiting abatement	0	2	2	2	3
Various stages of abatement	5	8	3	13	25
Total Cases	134	97	60	59	53

⁹ Based on data generated March 13, 2006.

Table1: Percent of Children in Providence In Compliance
with Screening Guidelines 1998 - 2002

Year born	Number of children born	Number of children screened at least once by 18 months of age	Number of children screened at least twice, a minimum of 12 months apart, by 36 months of age
1998	2,334	1,724 (73.9%)	1,050 (45.0%)
1999	2,363	1,731 (73.3%)	1,033 (43.7%)
2000	2,570	2,017 (78.5%)	1,108 (43.1%)
2001	2,638	2,009 (76.2%)	1,181 (44.8%)
2002	2,709	2,033 (75.0%)	1,205 (44.5%)

Table 2A: Incidence of Lead Poisoning in Providence 1996 - 2005

Year	Number of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time	Number of children screened with no previous elevated BLL	Incidence
1996	1,419	6,216	22.8%
1997	1,024	6,256	16.4%
1998	701	6,017	11.7%
1999	849	6,304	13.5%
2000	681	6,139	11.1%
2001	761	7,401	10.3%
2002	618	7,144	8.7%
2003	473	7,628	6.2%
2004	487	7,739	6.3%
2005	341	7,539	4.5%

Table 2B: Incidence of Lead Poisoning Statewide 1996 - 2005

Year	Number of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time	Number of children screened with no previous elevated BLL	Incidence
1996	3,368	27,297	12.3%
1997	2,369	28,125	8.4%
1998	1,870	28,170	6.6%
1999	2,025	29,187	6.9%
2000	1,740	28,419	6.1%
2001	1,857	31,848	5.8%
2002	1,535	31,954	4.8%
2003	1,161	31,579	3.7%
2004	1,167	31,610	3.7%
2005	621	31,669	2.0%

Table 3A: New Lead Poisoning Cases by Age
in Providence 2005

Age	Number of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time	Age	Number of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time
<12 months	19	5.6%	<12 months	36	5.8%
12-23 months	128	37.5%	12-23 months	226	36.4%
24-35 months	100	29.3%	24-35 months	184	29.6%
36-47 months	44	12.9%	36-47 months	92	14.8%
48-59 months	25	7.3%	48-59 months	50	8.1%
60-72 months	25	7.3%	60-72 months	33	5.3%
Total	341	100.0%	Total	621	100.0%

Table 3B: New Lead Poisoning Cases by Age
Statewide 2005

Table 4A: New Lead Poisoning Cases by
Blood Lead Level in Providence 2005

Blood Lead Level	Number of children with elevated BLL for the first time	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time
10-14 $\mu\text{g/dL}$	238	69.8%
15-19 $\mu\text{g/dL}$	50	14.7%
20-24 $\mu\text{g/dL}$	31	9.1%
25+ $\mu\text{g/dL}$	22	6.5%
Total	341	100.0%

Table 4B: New Lead Poisoning Cases by
Blood Lead Level Statewide 2005

Blood Lead Level	Number of children with elevated BLL for the first time	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$ for the first time
10-14 $\mu\text{g/dL}$	419	67.5%
15-19 $\mu\text{g/dL}$	114	18.4%
20-24 $\mu\text{g/dL}$	52	8.4%
25+ $\mu\text{g/dL}$	36	5.8%
Total	621	100.0%

Table 5A: Prevalence of Lead Poisoning
in Providence 1996 - 2005

Year	Number of children with BLL ≥ 10 $\mu\text{g/dL}$	Number of children screened	Prevalence
1996	2,817	8,674	32.5%
1997	2,216	8,678	25.5%
1998	1,574	7,952	19.8%
1999	1,506	7,804	19.3%
2000	1,211	7,365	16.4%
2001	1,294	8,729	14.8%
2002	1,127	8,386	13.4%
2003	831	8,732	9.5%
2004	778	8,684	9.0%
2005	558	8,319	6.7%

Table 5B: Prevalence of Lead Poisoning
Statewide 1996 - 2005

Year	Number of children with BLL ≥ 10 $\mu\text{g/dL}$	Number of children screened	Prevalence
1996	5,843	32,996	17.7%
1997	4,446	33,647	13.2%
1998	3,437	32,684	10.5%
1999	3,208	32,816	9.8%
2000	2,741	31,382	8.7%
2001	2,813	34,865	8.1%
2002	2,450	34,835	7.0%
2003	1,811	34,130	5.3%
2004	1,685	33,839	5.0%
2005	981	33,156	3.0%

Table 6A: Prevalence of Lead Poisoning by Age
in Providence 2005

Age	Number of children with BLL ≥ 10 $\mu\text{g/dL}$	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$	Age	Number of children with BLL ≥ 10 $\mu\text{g/dL}$	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$
<12 months	18	3.2%	<12 months	36	3.7%
12-23 months	159	28.5%	12-23 months	267	27.2%
24-35 months	149	26.7%	24-35 months	287	29.3%
36-47 months	104	18.6%	36-47 months	183	18.7%
48-59 months	69	12.4%	48-59 months	124	12.6%
60-72 months	59	10.6%	60-72 months	84	8.6%
Total	558	100.0%	Total	981	100.0%

Table 6B: Prevalence of Lead Poisoning by Age
Statewide 2005

Table 7A: Prevalence of Lead Poisoning by
Blood Lead Level in Providence 2005

Blood Lead Level	Number of children with elevated BLL	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$
10-14 $\mu\text{g/dL}$	374	67.0%
15-19 $\mu\text{g/dL}$	90	16.1%
20-24 $\mu\text{g/dL}$	51	9.1%
25+ $\mu\text{g/dL}$	43	7.7%
Total	558	100.0%

Table 7B: Prevalence of Lead Poisoning by
Blood Lead Level Statewide 2005

Blood Lead Level	Number of children with elevated BLL	Percent of children with BLL ≥ 10 $\mu\text{g/dL}$
10-14 $\mu\text{g/dL}$	632	64.4%
15-19 $\mu\text{g/dL}$	193	19.7%
20-24 $\mu\text{g/dL}$	83	8.5%
25+ $\mu\text{g/dL}$	73	7.4%
Total	981	100.0%

GLOSSARY

Abatement

An activity that reduces the risk of human exposure to lead.

BLL

Blood lead level.

Elevated Blood Lead

One blood lead test result between 10-19 µg/dL.

EIBLL

Environmental Intervention Blood Lead Level. Synonymous with Significant Lead Poisoning.

Incidence

The proportion of new cases of a disease that develops during a specified period of time among the population at risk for developing the disease. For example, the incidence of lead poisoning in Rhode Island in 2005 is the proportion of children with a first-time elevated blood lead level among those at risk for developing lead poisoning (i.e. children under age 6 who have never been lead poisoned in the past).

Lead Center

A non-profit agency funded by Medicaid that offers comprehensive case management services to families of children with lead poisoning.

Lead Safe

A condition where a surface, material, substance, or medium (water, soil, dust) has environmental lead levels in the permissible range, as defined by the Rhode Island regulations, and/or does not contain lead in a condition that is readily accessible to children under six years of age. A lead-safe condition does not require lead hazard reduction, but does require routine maintenance and an annual re-inspection.

Lead Hazard Mitigation Law

Legislation introduced by Senator Thomas Izzo, which passed and became law in June 2002. The law modified the Lead Poisoning Prevention Act and established standards for the maintenance of pre-1978 rental property in Rhode Island.

NOV

Notice of violation. A notice for owners of regulated facilities to abate any significant environmental lead hazards in accordance with the Regulations upon receipt of notice of significant environmental lead hazards following an environmental lead inspection or lead assessment.

Prevalence

The proportion of people in a population who have a given disease at a specific point in time. For example, prevalence of lead poisoning in 2005 is the proportion of children who had an elevated blood lead level in 2005.

Razed

Demolished or leveled to the ground. Premises are no longer regulated by RI CLPPP if all buildings and structures on the premises are razed.

RI CLPPP

The Rhode Island Childhood Lead Poisoning Prevention Program. The program is a collaboration of three Divisions in the Rhode Island Department of Health: Family Health, Environmental Health, and the Laboratory.

GLOSSARY

Screening

Mandatory test that involves collecting a blood sample from a child under the age of six who does not show any signs or symptoms of lead poisoning, either through a finger stick or a venipuncture, and then analyzing the sample to determine the amount of lead in the child's blood.

Significant Lead Poisoning

A venous blood lead level ≥ 20 $\mu\text{g/dL}$ in a child under six years of age, or two BLLs (capillary or venous) 15-19 $\mu\text{g/dL}$ from a child under six years of age, done between 90 and 365 days apart.

$\mu\text{g/dL}$

Micrograms per deciliter of blood. The measurement used to estimate the amount of lead in a sample of blood. This measure is sometimes represented as mcg/dL.

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